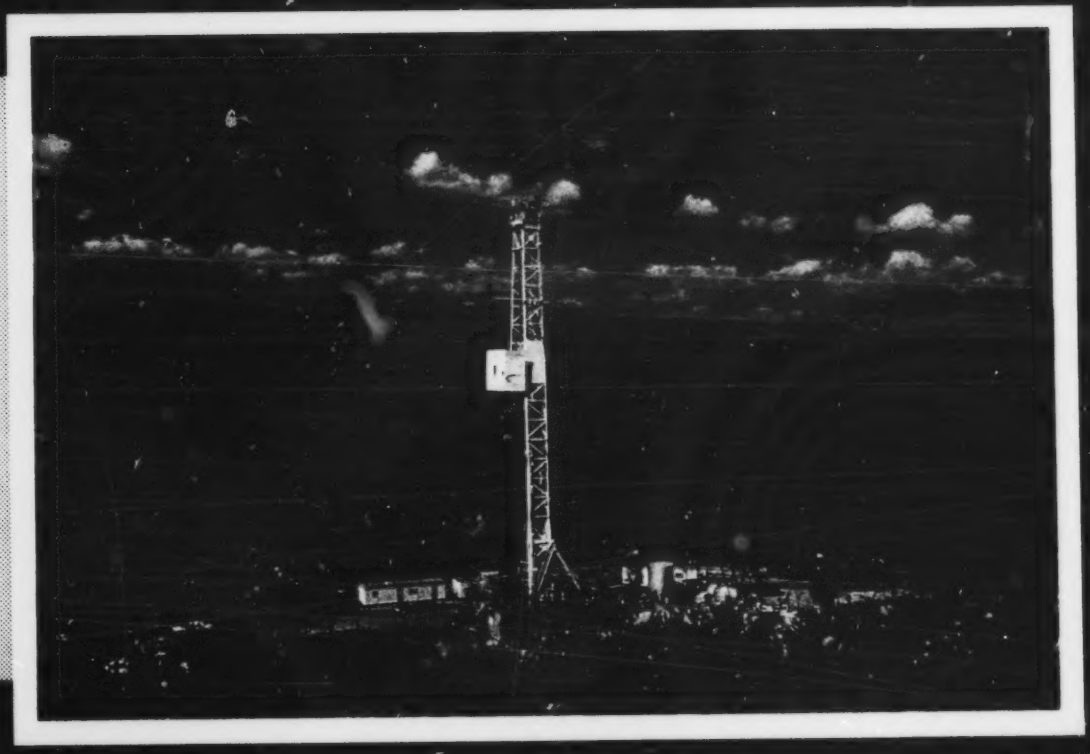
CANADIAN PETROLEUM ASSOCIATION

RESPONSE TO ENVIRONMENT CANADA'S "FRAMEWORK FOR DISCUSSION ON THE ENVIRONMENT"

A Summary of Issues for Input into "The Green Plan: A National Challenge"



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PREFACE

This document presents the Canadian Petroleum Association's response to issues in the Government of Canada's *Framework for Discussion on the Environment*. The *Framework for Discussion* outlines major environmental issues confronting Canada and was published to initiate discussion and encourage cooperative problem solving among all Canadians. The feedback collected from these discussions will be used by the government in preparing *The Green Plan: A National Challenge*, to be issued later this year. *The Green Plan* will describe Canada's environmental problems and the country's plans to address these problems.

The Canadian Petroleum Association's response to the *Framework for Discussion* incorporates views and concerns expressed by its member companies in the upstream petroleum industry. The Canadian Petroleum Association requests its concerns expressed in this document be given due consideration in the formulation of the Government of Canada's *Green Plan*.

Canadian Petroleum Association members are important stakeholders in the environmental issues discussed in this document; they produce about 80 percent of Canada's crude oil and 70 percent of its natural gas, and conduct more than 90 percent of the country's pipeline transportation. These activities account for about two-thirds of all upstream petroleum industry spending in Canada.

Through this document, the Canadian Petroleum Association is fulfilling its role of acting as a vehicle for upstream petroleum industry members to share information and work together on issues important to them, the government and the public. Other major responsibilities of the Canadian Petroleum Association include informing the Canadian public about critical energy issues, preparing technical and analytical submissions on behalf of the upstream petroleum industry for governments, and gathering and disseminating operating, economic and policy information for members. In cooperation with government and environmental agencies, the CPA also commissions research and helps to set guidelines for the upstream petroleum industry.

DOCUMENT ORGANIZATION

This document is organized as follows:

INTRODUCTION

An introduction to the Canadian Petroleum Association's (CPA) response to the *Framework for Discussion* introduces readers to the detailed responses that follow.

SUMMARY OF KEY CONCERNS

This section discusses key issues from the *Framework for Discussion* that most affect the upstream petroleum industry. Other issues not identified in the *Framework for Discussion* but important to the industry are also discussed here. At the end of this section is a summary table of the CPA's responses to all issues raised in the *Framework for Discussion*, and of issues not addressed by the CPA.

For an overview of the CPA's response, read both the Introduction and the Summary of Key Concerns.

DETAILED RESPONSES TO ISSUES

This section presents the CPA's detailed responses to those issues raised in the *Framework for Discussion* that are relevant to the upstream petroleum industry. The responses are listed under the same headings and in the same order as in the *Framework for Discussion* to allow for easy cross-reference.

APPENDICES

Several appendices present background detail for information presented in the rest of the report.

ABBREVIATIONS

This final section provides quick reference to abbreviations and acronyms used throughout the report.

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INTRODUCTION

The Canadian Petroleum Association (CPA) supports the Canadian government's preparation of a *Green Plan* that will help protect and preserve the environment. The association strongly believes sustainable development is an attainable goal and that it can be achieved by government, industry, the public, researchers, educators and other interested parties working together. We are all responsible for protecting the environment on behalf of present and future generations.

The CPA believes the *Green Plan* must be an overall environmental management plan that prioritizes issues, and that it must be developed through dialogue and consultation with all stakeholders. Canada's environment cannot be effectively managed in the '90s by moving from crisis to crisis. The issues are too important.

This document outlines the CPA's response to the government's *Framework for Discussion*. It addresses only those issues relevant to the upstream petroleum industry, which is made up of companies that explore for, produce and transport oil and natural gas. This response is the result of lengthy discussions and input from nineteen committees and task forces currently functioning within the CPA. The CPA appreciates the opportunity to express its industry's views and is confident this information will contribute to the Government of Canada's *Green Plan*.

In preparing this document, the CPA continues its commitment to the environment. For many years, the association has managed environmental protection efforts in the upstream petroleum industry by supporting research programs, preparing environmental codes of practice and guidelines for use by its members, and by participating in cooperative projects with government. Since 1970, CPA members have contributed $300 million toward environmental research alone, mainly through joint programs. For a complete description of the CPA's environmental program, including planned future activities, see Appendix A.

This summary of CPA's response to the *Framework for Discussion* is divided into two sections. The first section presents the CPA's key concerns about the government's *Green Plan* in general, and about the specific issues raised in the *Framework for Discussion* that are most important to the upstream petroleum industry.

The second section summarizes, in a table, the CPA's responses to the many detailed issues in the *Framework for Discussion*.

KEY CONCERNS

Sustainable Development

The CPA fully supports sustainable development, and is confident it is an achievable goal, in both developed and frontier areas. Economic development and environmental protection do not have to severely limit one another to be successfully achieved. By working together, the government, private sector and public can find solutions that will ensure economic opportunities and protection of the environment for future generations. The CPA underlies this belief with the following definition of sustainable development: "development that ensures that the utilization of resources and the environment today does not damage prospects for their use by future generations."[1]

To this end, the CPA has developed an Environmental Code of Practice (see Appendix A) and Environmental Operating Guidelines, which move the upstream petroleum industry toward its goal of sustainable development.

Consultation with all Parties

Industry and all other stakeholders must be involved with the government in planning any environmental programs, policies or legislation that will affect them. Consultation is particularly important in early stages of all initiatives, to allow identification and planning for environmental impacts, and to determine the most efficient implementation of protection measures.

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[1] Source: Report of the National Task Force on Environment and Economy, submitted to the Canadian Council of Resource and Environment Ministers, September, 1987.

Consultation with all Parties (cont'd)

Member companies of the CPA have a long and successful history of consulting with individuals and communities that have an interest in industry operations. The CPA is regarded as a leader in the field of public consultation and its recently issued Public Consultation Guidelines have been commended by a wide cross-section of Canadians.

Consultation on all issues must be done effectively, with adequate time allowed for parties to respond to issues. The timeframe given to respond to the *Framework for Discussion* was not adequate. These issues are serious and many of key importance to the CPA require further study and discussion before informed decisions can be made and action plans proposed.

Consultation on issues in the *Framework for Discussion* could also have been much more effective by providing more information on the issues, prioritizing the concerns and advising Canadians of the full costs of the proposals.

The CPA also strongly believes single-issue committees and consultations must be replaced with a consistent multistakeholder forum that advises government, and especially the Canadian Council of Ministers of the Environment, on the status of individual environmental matters and how they interrelate.

Balance Between Environmental and Economic Costs

Canadian governments, private sectors, and publics must assess the economic, social and environmental costs of all environmental initiatives proposed and balance the costs and benefits when making plans for environmental protection. Canada's financial resources are limited and environmental protection measures may draw funds from other essential expenditures, such as development and social programs. Canadians must prioritize their plans and balance their choices to ensure our economy remains strong, both nationally and regionally, to sustain proposed environmental programs. Also, the upstream petroleum industry is concerned that the government may be tempted to implement environmental controls and standards that are so strict they place Canadian industry at an economic disadvantage among its competitors, without providing a significant degree of improvement to environmental quality.

Balance Between Environmental and Economic Costs (cont'd)

Canadian industry must remain competitive to support Canada's environmental goals.

Legislation and Regulation

The CPA agrees further clarification and streamlining of current regulatory procedures is required. The CPA also supports coordination of government regulations, especially where there is parallel, shared or conveyed jurisdictional authority.

The upstream petroleum industry believes in being proactive with respect to environmental regulation. To this end, the CPA has prepared an environmental code of practice, which outlines guiding principles all member companies should follow in their operations (See Appendix B for this code). This significant work is supported by detailed environmental operating guidelines, contained in an 800-page compilation of legal, regulatory and technical requirements for environmentally sound oilfield practices. (The detailed guidelines are available from the CPA.)

If more regulations are found to be required, the CPA must be involved in planning new legislation. The CPA has had the opportunity to submit comments on several drafts of environmental regulations (such as regulations for nitrogen oxide control, provincial environmental impact statements, volatile organic compounds control and the Canadian Environmental Protection Act [CEPA]) and would like to continue open dialogue with all regulatory bodies.

Compliance and Accountability

The CPA is supportive of a cooperative approach to environmental regulation, first stressing abatement and compliance, and then moving to enforcement if required. The CPA recommends development of performance incentives as a means of encouraging compliance and accountability, especially for those who meet or perform better than government requirements.

The association supports and welcomes enforcement for non-cooperative, persistent violators and those who blatantly endanger human safety or the environment. As a generalization, the CPA believes effective control can be better achieved

Compliance and Accountability (cont'd)

through enforcement of the laws and regulations already in place rather than by the creation of additional controls.

Economic Instruments

Economic policy instruments should be realistic, affordable, and cost-effective in solving real environmental and human health problems. Such instruments are usually most effective when applied at the consumer level. It is recognized that certain instruments, such as tradeable permits, dictate the need for other forms of application.

Canada's first priority should be to better understand the scientific and economic consequences of all proposed instruments before taking any actions that could profoundly affect the Canadian economy. The CPA supports further study and discussion among governments and all stakeholders on the possible use of market-based instruments and their economic and scientific impacts, for achieving environmental objectives.

Of concern to the CPA is the possibility that costly unilateral Canadian action could lead to the needless dislocation of industries, with no significant improvement in world environmental quality.

The CPA does not support discriminatory environmental taxes; if the government introduces taxes for any environmental reason (e.g., emissions or violations), or in any other way collects money for environmental protection, the CPA strongly believes such revenues should be committed to environmental protection programs, rather than added to general government revenues.

Better Science and Communication

More research on environmental and health concerns is needed to improve environmental protection in Canada. The research is needed both to improve methods of environmental protection and to separate real from perceived concerns. The results of all research must be better communicated, and those concerns without scientific basis must be addressed through education of concerned parties.

Better Science and Communication (cont'd)

As mentioned below in Strengthening Partnerships, the CPA recommends coordinated research efforts by government, universities and industry.

Strengthening Partnerships

The CPA feels partnerships are essential to solve Canada's environmental problems, and supports the strengthening of partnerships in many areas of environmental management.

Coordination of research among federal and provincial governments, industry and universities should be a high priority. Research is an area where the use of existing resources should be prioritized and coordinated, to avoid duplication of effort and achieve results most cost-efficiently. Currently, a strong coordinated effort is lacking. Research by the upstream petroleum industry was not mentioned in the *Framework for Discussion;* industry should be included as a valuable contributor.

Partnerships among the federal, provincial and territorial governments should also be strengthened to avoid duplications and uncertainty in regulations. (See Legislation and Regulation above for more information.)

Waste Management

The CPA agrees with the promotion of waste reduction and recycling, although the feasibility of 50 percent waste reduction by the year 2000 needs to be evaluated. Although the CPA also agrees with the establishment of a government Office of Waste Management to promote and coordinate waste management activities, greater efforts will likely be needed to achieve the target waste reduction. Waste management must be coordinated among all waste generators and waste management facilities, with consideration given to technology, economics and markets for recyclable goods.

There will be costs for increasing efforts and for measuring progress toward the goal of 50 percent reduction. The full costs of all waste management measures must be determined and agreement made regarding distribution of costs.

Waste Management (cont'd)

As well as agreeing on costs, government and industry must work together and agree upon adequate definitions for hazardous wastes. Currently, classifications do not always follow criteria for environmental hazard, which leads to confusion and inappropriate treatment of wastes.

The CPA strongly supports the location of hazardous waste management facilities in Canada, and the requirement for the locations to be chosen on the basis of accurate scientific information, public input and timely environmental review. The CPA supports the need for these facilities to comply with strict guidelines developed by both industry and government.

The CPA also proposes both federal and provincial governments cooperate in the development of waste management programs; waste management is presently a provincial responsibility.

Global Warming

The CPA supports the government's emphasis on this issue of great global concern. Because of this concern, the CPA has formed a global warming task force, which will be studying the issue over the next two years.

To obtain greater understanding of global warming and reduce scientific uncertainty, the CPA supports increased research and improved science. Canada needs to understand the complex interrelationship of carbon dioxide, other greenhouse gases, clouds and oceans in the process of global warming. Increased knowledge can enable more accurate predictions of climatic trends and their effects on regions of Canada and the world.

The CPA agrees with establishing a Centre for Climate Change Research to conduct some of this necessary research on the effects of global warming. The CPA suggests the proposed centre focus research on the Canadian climate and that it closely tie its research to that of other recognized centres, to avoid duplication of effort.

The CPA also supports energy conservation for industry operators, customers and consumers, to reduce carbon dioxide emissions. At present, the CPA does not support reducing emissions to meet specific target levels because of a lack of

Global Warming (cont'd)

supporting scientific data; however, it does support a conservation and reporting strategy similar to that established in the mid 1970s by the Canadian Industrial Program for Energy Conservation Council. Strategies should be devised through joint discussions among industry, government and the public, with consideration of economic instruments, new technologies, and regulation.

The CPA agrees Canada's strategies to reduce greenhouse gas emissions must be prepared in harmony with those of other countries because little global improvement would be obtained by unilateral actions. Unilateral actions could also jeopardize Canada's international competitiveness.

Other steps recommended by the CPA to address global warming are to prepare for potential impacts of global warming and to educate all sectors of Canadian society about the concern.

Water Issues

The CPA supports increased research on water pollution with emphasis on toxics, including long-term acceptable levels for toxic compounds in surface waters and waters used for human consumption, livestock and irrigation. A special focus for Canadian research should be the effect of spring-melt waters on our streams, lakes and oceans in both southern and northern regions of Canada.

The CPA supports the provision of information on water quality and quantity to the public on a continuing basis. The CPA feels the national water atlas, proposed in the *Framework for Discussion,* would not be the best way to do this as it may be difficult to keep current. A short-term (e.g., quarterly) system of easily-accessible data on both the quality and quantity of ground and surface water is needed to support ongoing decision making. Development of such a system must be coordinated among relevant stakeholders.

The CPA supports promoting the development and demonstration of water-saving and non-polluting technologies, and suggests an organization similar to the Panel on Energy Research and Development (PERD) could effectively direct water-related research. Water management technology may be

Water Issues (cont'd)

developed through government research, shared research by governments, or research by private industry.

Economic instruments should be evaluated for their effectiveness in promoting environmentally sound water management; however, these measures must be applied equitably with consideration for their effects on water users. Water pricing, for example, could have significant impacts on established water users, and should include phase-in periods to allow adjustment to the added financial burden. Increased cost to industry could also increase costs to consumers.

The CPA is unsure of the thrusts and contents of proposed Drinking Water and Canada Oceans Acts. Before such acts are developed, consultation with the CPA must be established.

Protecting the Arctic Environment

The CPA is in favour of the *Federal Arctic Environmental Strategy,* which will focus on economic development, resource management, pollution and protected regions. This document should include discussion of development of non-renewable resources; the CPA believes non-renewable resource development is possible in many arctic regions without disrupting the arctic ecosystem.

Areas that must be excluded from development should be excluded on the basis of sound technical knowledge and by employing land use planning procedures now being developed for the north. Protected areas must be selected with due regard for all potential land uses.

The CPA also supports the government's proposal to develop centralized disposal and storage sites for wastes in the Arctic.

Environmental Emergencies

The CPA supports government initiatives to improve techniques for understanding and detecting natural hazards, and to improve education and communication of natural hazards and severe weather. The upstream petroleum industry has a particular interest in better and longer range forecasting for exploration and production scenarios in isolated offshore areas.

Environmental Emergencies (cont'd)

The CPA supports the need for a government Environmental Emergency Program to cover the production, transportation and disposal of oil, chemicals and other potentially hazardous substances. However, the upstream petroleum industry is in the best position to respond to its own emergencies and should retain this responsibility. The upstream petroleum industry has a long history of environmental research and emergency response planning, including extensive work in the Beaufort Sea area and off Canada's east coast. Also, the upstream petroleum industry's state of preparedness for oil spill response has recently been evaluated by the Task Force on Oil Spill Preparedness and the resulting recommendations are being implemented.

National Parks and Wilderness

The CPA supports the establishment of new parks and heritage sites. The potential for development of non-renewable assets and the need for linear transportation corridors (i.e., pipelines) should be considered when selecting parks locations. A more open consultative process is needed, involving all stakeholders, in the selection of areas for parks and wilderness areas.

Wildlife

The CPA supports new federal programs to protect wildlife populations and habitat. The CPA believes a proper protection strategy can be developed only through research, monitoring and assessments of the effects of development activities. The CPA, for its part, has participated in the Beaufort and Mackenzie Valley Environmental Monitoring Projects managed by the Department of Indian and Northern Affairs, and in a number of national and international projects on the nature, habits and habitat of bowhead and beluga whales, polar bears, seals and other wildlife.

There is, however, a need for both federal and provincial governments to objectively assess all factors that impact wildlife. For example, hunting and tourism often have a greater impact on wildlife than industry, yet more emphasis is placed on industry because it is easier to target and regulate. A wildlife protection strategy should be developed within the context of sustainable development.

RESPONSES IN BRIEF

The CPA's responses to all issues in the *Framework for Discussion* are presented in an abbreviated table on the following pages. The table lists the issues addressed, whether the CPA supports the issue, and the page number in this report where the topic is discussed in detail.

In the table, the CPA's responses to issues in the *Framework for Discussion* are coded as either S for support, CS for conditional support or NS for no support. Support indicates agreement with the concept in principle. Conditional support indicates general agreement with the concept, but a need for modifications before full support can be provided by the CPA. No support indicates the CPA does not support the proposal as it is currently stated.

Even though support or conditional support for some issues is indicated, the CPA still requests input into how and when all issues that may affect the upstream petroleum industry are addressed.

Of the 67 issues identified as relevant to the CPA and discussed in this document, 88 percent are supported or conditionally supported by the CPA.

Following the table is a list of the issues raised in the *Framework for Discussion* that are not addressed by the CPA because they are not relevant to the upstream petroleum industry.

SUMMARY TABLE OF CPA RESPONSES TO ISSUES FROM FRAMEWORK FOR DISCUSSION

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2. Federal Government to Promote Cooperative Environmental Science Efforts	S	24
3. New Program to Promote Environmental Research at Canadian Universities	S	26
4. Government/Private Sector, Cost-Shared Environmental Technology Demonstration Fund	S	27
B. More Information About the Environment		
1. Organize Cooperative Efforts to Improve Reporting of Environmental Information	S	28
2. Further Develop Environmental Satellite National Accounts	S	29
3. Annual Environmental Outlook and Policy Statement from Government	S	29
4. National Environmental Library	NS	31
C. Education		
1. Government Cooperation in the Establishment of Priorities for Environmental Education	S	32

LEGEND: S = Support (support the concept), CS = Conditional Support (agree with concept, but need modifications before full support can be provided), NS = No Support

ISSUE	RESPONSE	PAGE NUMBER
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2. Establishment of Cooperative National Training Program for CEPA Enforcement	S	34
3. Strengthening Government Enforcement or Emphasizing Compliance	CS	34
4. Methods of Clarifying and Streamlining Regulatory Procedures	S	36
E. Economic Instruments		
1. Discussions on Advantages and Disadvantages of Economic Instruments After Release of *Green Plan*	S	37
2. University Network Research Program on Application of Economic Instruments	S	39
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A. Government Review and Modification of Policies, Laws and Regulations	S	40
B. Government Adoption of Code of Environmental Stewardship	S	41
C. Compulsory Environmental Audits for Industry and the Government; Publicized Results	CS	42
Strengthening Partnerships		
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Toxic Substances		
A. More Rapid Assessment of Priority Substances	NS	49
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C. More Research on Toxic Substances	CS	50
D. Development of National Toxicology Network	S	50
E. National Standards for Toxic Substances Under CEPA	CS	51

LEGEND: S = Support (support the concept), CS = Conditional Support (agree with concept, but need modifications before full support can be provided), NS = No Support

ISSUE	RESPONSE	PAGE NUMBER
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B. Addressing Public Concerns in Locating Waste Facilities	S	55
Environmental Emergencies		
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B. Enhanced Education About Impacts of Severe Weather	S	57
C. Introduction of a Government Environmental Emergency Program	CS	57
The Health Dimension		
A. Initiatives Related to the Linkage Between Environmental Problems and Health	CS	59
THE GLOBAL COMMONS		
Atmospheric Change		
A. Global Warming		
1. Establish a Centre for Climate Change Research	S	61
2. Greenhouse Gas Emission Targets for Canada	NS	62

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ISSUE	RESPONSE	PAGE NUMBER
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6. Consistency of Energy Megaprojects with Reductions in Greenhouse Gases	CS	65
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2. Increase Ozone Research and Establish Arctic Ozone Observatory	CS	68
C. Acid Rain		
1. Sulphur Dioxide Emission Agreements for Western Canada	NS	69
2. Work in Addition to Research on Long-Range Transport of Airborne Pollutants in Western Canada	CS	70
Water		
A. Increased Research on Water Pollution	S	70
B. Increased Monitoring and Forecasting of Water Quality and Quantity	S	71
C. Preparation of National Water Atlas	NS	71

LEGEND: S = Support (support the concept), CS = Conditional Support (agree with concept, but need modifications before full support can be provided), NS = No Support

ISSUE	RESPONSE	PAGE NUMBER
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A. Better Use and Protection of Canadian Forests	S	75
Fisheries		
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B. Protection of Fish Habitat Where Provincial Authorities Administer Freshwater Fishery	S	76
C. Priority Areas for Improving Fisheries and Oceans Science Capacity	CS	77
PRESERVING ECOLOGICAL AND HERITAGE RESOURCES		
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A. New National Parks and Completion of Parks System	CS	78

LEGEND: S = Support (support the concept), CS = Conditional Support (agree with concept, but need modifications before full support can be provided), NS = No Support

ISSUE	RESPONSE	PAGE NUMBER
Wildlife		
A. Program to Protect Wildlife and Wildlife Habitat	CS	79
B. Wild Animal and Plant Protection Act and Endangered Species Act	S	80
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PROTECTING THE ARCTIC ENVIRONMENT		
A. Sustainable Development of Renewable Northern Resources	S	81
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LEGEND: S = Support (support the concept), CS = Conditional Support (agree with concept, but need modifications before full support can be provided), NS = No Support

ISSUES IN THE FRAMEWORK FOR DISCUSSION NOT ADDRESSED BY THE CPA

THREE STEPS TO CHANGING DECISION-MAKING

Strengthening Partnerships	Youth summer employment, training and career development in environmental issues

ENVIRONMENTAL STRESSES

Toxic Substances	Increased regulation of biotechnology industry
Waste Management	National regulations re: packaging and recycling versus education, pricing and voluntary action

THE GLOBAL COMMONS

Global Warming	Government assistance to developing countries for adopting sustainable forestry practices
Air Quality and Toxic Air Pollutants	Proposal to establish California emission standards for 1994 cars
Water	Cleanup of the Fraser River
	Participaction-type program for water conservation

SUSTAINING OUR RENEWABLE RESOURCES

Agriculture	Agricultural waste management practices
	Role of consumers in environmentally sound agriculture
Fisheries	International action needed to deal with overfishing and driftnetting
Forests	Federal and provincial forest jurisdiction

PRESERVING ECOLOGICAL AND HERITAGE RESOURCES

National Parks and Historic Sites

Monitoring levels of service in parks

Innovative ways of financing new and existing parks

Priorities for park use

IMPROVING DECISION-MAKING

THREE STEPS TO CHANGING DECISION-MAKING

Factors that Affect Decision-Making

A. Better Science

1. Increased Government Commitment to Environmental Science and Technology

Areas of Support

The CPA fully supports the Canadian government's proposal to increase its commitment to environmental science and technology by increasing scientific research. To effectively identify and prioritize research needs, the CPA requests government involve industry members directly affected by environmental issues and technologies.

The CPA also recommends development of funding mechanisms to encourage more joint initiatives between government and the upstream petroleum industry. The government should also develop mechanisms that encourage industry to further increase its own scientific environmental research, and should develop and maintain an inventory of environmental research.

Areas of Concern

The CPA believes the need for a more coordinated effort among research groups is paramount to the success of Canadian environmental research. Currently, a strong coordinated effort is lacking among these groups. In addition, Canadian research programs should focus on a limited number of specific issues; through specialization, Canada can become a world leader in a few focused areas instead of simply developing limited capability in many. As needs and technology change, priority areas should be reviewed.

Factors that Affect Decision-Making (cont'd)

The CPA also believes all research initiatives should recognize the international nature of the issues involved; new initiatives should take into account worldwide efforts in environmental science and technology to benefit from existing information and to avoid duplication.

Background

The Canadian government supports and directs such a large number and broad range of research programs, great potential exists for duplication and loss of direction.

2. **Federal Government to Promote Cooperative Environmental Science Efforts**

Areas of Support

The CPA agrees with the proposal to promote cooperative environmental science efforts between public and private sectors. The CPA also supports the development of a federal government panel, similar to PERD, to encourage cooperative efforts among research groups. The scientific and technical community in Canada is too small to encourage development of separate, and potentially competing environmental research efforts.

Areas of Concern

The *Framework for Discussion* makes the assumption that all research is undertaken by government and universities, when in fact, CPA members have undertaken many research projects, investing approximately $300 million in research since 1970. The CPA feels it is important to note that environmental science efforts within the upstream petroleum industry are proactive and continually increasing, emphasizing the need for industry to participate in identification of research priorities.

Factors that Affect Decision-Making (cont'd)

If a new panel is created, the CPA recommends it have a mechanism to allow transfers of funds across departments as priorities change. The CPA has observed levels of funding allocated by PERD to various departments are difficult to change, even when justified by changing priorities.

The panel should also allocate a portion of its budget to projects conducted jointly with industry members. This part of the program should be open to industry proposals.

Background

Many research projects conducted by CPA members have been joint initiatives with other industry members, associations, government departments and Canadian universities. In addition, the CPA has introduced several environmental research initiatives including the:

- Acid Deposition Research Program (ADRP)
- Canadian Offshore Oil Spill Research Association
- Environmental Research Advisory Committee

Currently, the CPA supports a variety of research initiatives such as the Task Force on Oil Spill Preparedness (TFOSP), which is committed to spending $5.5 million on research over five years. Another of the CPA's research activities is the Environmental Studies Research Fund (ESRF), which is funded entirely by petroleum company contributions (at about $1 million per year) and managed jointly with government.

In addition to research funded by the upstream petroleum industry, CPA members provide advice to several externally funded research groups, including governments. A notable example is PERD which, although primarily energy-focused, also includes energy-related environmental research in its mandate. CPA representatives sit on several PERD technical committees and provide input on petroleum industry priorities and research needs.

Factors that Affect Decision-Making (cont'd)

PERD was created to provide government scientists with funds to conduct research on issues related to energy development. Throughout the growth of this program, the upstream petroleum industry has become increasingly involved in providing input into program evaluation and development, and a true partnership has developed between government and industry. This mutual trust and respect on a technical level should be used as the basis for any environmentally based federal initiative.

Based on PERD's success in fostering high-quality research, cross-departmental dialogue and collaboration among energy researchers, the CPA anticipates positive results from a new environmental research panel. In particular, the CPA supports a PERD-like panel because PERD has proven such panels value and respond to industry input.

3. New Program to Promote Environmental Research at Canadian Universities

Areas of Support

The CPA endorses the proposal to promote fundamental environmental research in Canadian universities. Such an initiative will increase Canadian scientific knowledge and produce trained Canadian environmental scientists.

Areas of Concern

The Natural Sciences and Engineering Research Council (NSERC), which funds Canadian environmental research, should allocate some of its budget to cooperative programs conducted by industry and universities.

Background

CPA members currently support basic research in Canadian universities through several methods. Many companies offer scholarships and grants to students in both undergraduate and

Factors that Affect Decision-Making (cont'd)

graduate programs. In addition, the upstream petroleum industry contracts a significant amount of scientific and technical research to Canadian universities, and supports joint industrial research programs that match grants from NSERC. These activities should be continued, but with an added emphasis on environmental research.

Regarding industry-university cooperative programs, CPA members have found them effective in the engineering field, and encourage the allocation of funds for similar programs in the environmental field.

4. Government/Private Sector, Cost-shared Environmental Technology Demonstration Fund

Areas of Support

The CPA concurs with the government's proposal for an environmental technology demonstration fund.

Areas of Concern

The CPA prefers a cost-shared approach to this fund and suggests an advisory/screening committee with industry representation to review proposals for technical merit and relevance.

Background

The upstream petroleum industry has demonstrated a high level of innovation in creating technology to solve a wide range of problems. Good examples are technological developments that increase human and environmental protection and job efficiency in Arctic operations. The upstream petroleum industry has actively encouraged its contractors to market these innovations internationally. Based on its extensive record of technological achievements,

Factors that Affect Decision-Making (cont'd)

industry is confident in its ability to assess the functional and operational feasibility of new concepts in environmental technology.

B. More Information about the Environment

1. Organize Cooperative Efforts to Improve Reporting of Environmental Information

Areas of Support

The CPA fully supports improvement of environmental reporting through cooperative efforts. The CPA agrees there is a need to improve recording environmental information, management of the information, and presentations to the public.

Areas of Concern

Canadians need better access to environmental data; however, they also need to improve their understanding of this information. Any proposed improvements to recording and handling environmental information should be designed to accomplish both goals. The purpose of information management should also be to relate single issues to the broader spectrum of environmental concerns and discourage single-issue solutions.

To improve recording of information, the CPA believes many current industry emission monitoring programs require integration into broader environmental monitoring programs, such as regional air quality monitoring and state-of-the-environment reporting. Emission data can then be related to a broader base of environmental information.

Background

The upstream petroleum industry expends substantial amounts of manpower, administration and money on

Factors that Affect Decision-Making (cont'd)

environmental monitoring. It is imperative government analyze information collected and provide consultation and direction for improved reporting methods. Through this process, industry can modify its monitoring programs to provide the most meaningful data.

2. Further Develop Environmental Satellite National Accounts

Areas of Support

The CPA supports what it believes this concept to be: excerpting information from existing national economic data bases for use as environmental indicators.

Areas of Concern

This proposal is not fully explained in the *Framework for Discussion*. Based on the above interpretation, the CPA recommends the information derived not be limited to available data. Additional criteria for data may need to be added to the data base in conjunction with the development of more sophisticated state-of-the-environment reporting. Information gathered must be useful and industry should have input into determining what is useful. Furthermore, the satellite account information must have accompanying environmental information. For example, if statistics on the number and costs of trees replanted in forests are generated, companion data on the environmental effectiveness of those programs is required.

3. Annual Environmental Outlook and Policy Statement from Government

Areas of Support

The CPA welcomes the proposal for annual environmental outlook and policy statements because it considers state-of-the-environment reporting a societal necessity. As

Factors that Affect Decision-Making (cont'd)

the *Framework for Discussion* acknowledges, the five-year span is too long to wait for these statements. An annual update of easily tracked indicators will be more useful to Canadians.

Areas of Concern

Annual updates must be provided to the public no later than six months following the period end. Too many federal documents surface two to three years after the fact and are too late to be used for policy making. Annual outlook and policy statements must become a natural result of a national compilation of all provincial environmental reporting processes.

To ensure annual statements are credible, the CPA also recommends the federal government prepare the outlook and policy statements with input from all stakeholders. Input should be provided to the government, especially the Canadian Council of Ministers of the Environment, through an established, consistent body of multistakeholders rather than through single-issue committees and consultations. In this way, both consultation and reporting processes will move away from the current single-issue orientation and provide the public with more complete information. Industry and government can then better allocate resources to address priority issues and develop solutions that do not cause other single issue problems.

Background

Current government systems for reporting environmental information lack the broad scope needed to provide the public all information necessary to formulate realistic and feasible priority solutions to environmental concerns. The consultation process is too often single-issue oriented, resulting in narrow solutions that ignore related factors and relative priorities. Industry has consistently expressed the need for a multistakeholder forum to provide a balanced approach to the process and the solutions.

Factors that Affect Decision-Making (cont'd)

4. National Environmental Library

Areas of Support

The CPA does not support the creation of a national environmental library.

Areas of Concern

Although the CPA agrees there is a need to improve access to environmental information, it does not believe a new library will solve the problem. The real problem is not a lack of information sources, but a lack of organization among sources. For example, much environmental information from industrial monitoring is currently housed in government files; the CPA considers this data as lost because it cannot be easily retrieved by either the public or industry.

The CPA believes the best way to provide environmental information is through existing libraries. All information held by different sources throughout the nation should be retrieved, analyzed, organized, and made available through these libraries. This effort should complement satellite accounting and state-of-the-environment reporting.

For new and recent research, a national computer system is needed to compile data. This system could be directed by government but could provide business opportunities for university or private operators.

Above all, national information systems must be readily accessible and provide appropriate and timely information.

Factors that Affect Decision-Making (cont'd)

C. Education

1. Government Cooperation in the Establishment of Priorities for Environmental Education

Areas of Support

The CPA agrees there is a definite need for cooperation among federal and provincial governments in establishing environmental education priorities. Their cooperative goal should be to improve Canadians' abilities to make environmentally sound personal choices and to evaluate publicized environmental reports and protection efforts.

Areas of Concern

As one step to achieving this, the CPA requests governments mutually provide greater support for the Society Environment and Energy Development Studies Foundation (SEEDS). Although SEEDS is widely accepted in Canadian schools and its materials are adapted for use in other countries, it suffers from financial insecurity because of dependence on annual voluntary fundraising. As well, its French language programs are available only at the elementary level and the more costly development of high school programs has been delayed, also because of funding difficulties.

The CPA assists SEEDS by arranging funding for some of its programs; however, greater government involvement is needed on a national scale to provide additional direction and funding.

Background

SEEDS is jointly funded by industry and business (80 percent), government (10 percent), and private foundations (10 percent). Its mandate is to prepare teachers to instruct all grade levels in energy and environmental issues, and to create learning modules for students. All education materials

Factors that Affect Decision-Making (cont'd)

are developed exclusively by teachers. SEEDS is governed by a board with equal representation from industry, education and the social/environmental sciences.

D. Legislation and Regulation

1. Definition of Federal and Provincial Government Roles and Responsibilities in Accordance with CEPA

Areas of Support

The CPA supports and promotes a cooperative effort between the federal and provincial governments with respect to CEPA.

Areas of Concern

The CPA has no preference for dealing with either federal or provincial levels of government, but would find it unacceptable if it were necessary to deal with more than one jurisdiction on the same issue. The CPA stresses the importance of cooperation between both levels of government in developing compatible legislation, regulations and guidelines. Agreement must also be reached on which level of government assumes responsibility for administering the requirements.

Background

CEPA legislation sets basic standards for management of toxic substances across the country. The act also has provisions for granting equivalency to provinces that develop legislation equal to or more stringent than CEPA.

Factors that Affect Decision-Making (cont'd)

2. **Establishment of Cooperative National Training Program for CEPA Enforcement**

Areas of Support

The development of a cooperative national program for the training of CEPA enforcement officers is supported by the CPA. This will ensure consistency in CEPA's application and enforcement.

Areas of Concern

The CPA, as a major stakeholder under CEPA legislation, has a strong interest in being involved in consultations on the development of the national training program for CEPA enforcement. The association also feels that standards and criteria for a national training program must be determined with input and cooperation of all provinces and territories.

Background

The CPA has had previous involvement in law enforcement procedures by contributing to "An Action Plan for Environmental Law Enforcement in Alberta". This participation was beneficial to both the association and the government, and the CPA would like to provide a similar level of input into the national training program for CEPA enforcement.

3. **Strengthening Government Enforcement or Emphasizing Compliance**

Areas of Support

The CPA supports a phased, cooperative approach to environmental regulation, stressing abatement and compliance. The CPA also recommends the development of performance incentives as a means of encouraging compliance

Factors that Affect Decision-Making (cont'd)

and accountability, especially for those who meet or better government requirements.

The association supports moving to enforcement if required, specifically for:

- non-cooperation or non-action on agreed-upon compliance plans
- persistent violators
- wilful or gross negligence that endangers safety, human health or the environment

Areas of Concern

The association and its members prefer self-regulation wherever possible, as it provides flexibility and makes good business sense. An increased focus on enforcement could reduce the opportunity for a cooperative government-industry approach to environmental regulation.

Background

Cooperation, with emphasis on abatement and compliance, would cultivate a mutually beneficial relationship between government and industry, and enforcement of regulations would make clear government's intention to be firm when necessary. Enforcement alone would not provide industry the opportunity for input.

The CPA's support of compliance is evidenced by the fact that many companies within the upstream petroleum industry have voluntarily set environmental standards in the absence of imposed government standards. CPA activities that further support this include:

- development of the CPA Code of Practice

Factors that Affect Decision-Making (cont'd)

- development of the CPA "Environmental Operating Guidelines for the Alberta Petroleum Industry"
- research and development on a broad spectrum of environmental issues dedicated to helping members comply with regulations (e.g., CPA Waste Management Subcommittee Task Force on waste classification and disposal)
- involvement on the Neilsen Task Force, which deals with regulatory duplication and assignment of jurisdictions for various government departments

Member companies have also been involved in Environmental Assessment and Review Process panels, required by the federal government for work on federal land, with federal funding or having significant federal involvement.

4. Methods of Clarifying and Streamlining Regulatory Procedures

Areas of Support

The CPA agrees further clarification and streamlining of current regulatory procedures is required, especially where there is parallel, shared or conveyed authority for enforcement.

For new and revised regulations, the current pre-notification procedure is very useful and should be continued; however, further avenues for dialogue are required.

Areas of Concern

The CPA requests its members have the opportunity to provide input into draft regulations.

The CPA also suggests final drafts of proposed regulations be circulated before appearing in Gazette I or II. This would allow for submission of additional comments.

Factors that Affect Decision-Making (cont'd)

The amount of time allocated to industry and industry associations for responding to new or revised acts and regulations is often too short. Time frames must be maximized (e.g., 30 to 60 working days from time of issuance).

Background

The CPA has had the opportunity to submit comments on several drafts of environmental regulations (such as regulations for nitrogen oxide [NOx] control, provincial environmental impact statements, volatile organic compounds [VOC] control and regulations under CEPA) and would like to continue an open dialogue with all regulatory bodies in the future. Forty-five new regulations are currently proposed under CEPA, and the CPA requests the opportunity to review and comment on those that will affect its members. To this end, CPA has established a CEPA Task Force to review CEPA initiatives and proposed regulations. A regulations subcommittee has also been established to deal specifically with the 45 new pieces of legislation. Similar initiatives on regulations development are coming from the provinces as well, and must be coordinated wherever possible.

E. Economic Instruments

1. Discussions on Advantages and Disadvantages of Economic Instruments after Release of *Green Plan*

Areas of Support

It is critical that all types of economic instruments be studied for their effectiveness in promoting environmental protection. The costs of future environmental protection measures will be great; only with full investigation of all alternatives can the most effective and cost-efficient approach be determined.

The CPA strongly supports the inclusion of industry, business, Environmental Non-Government Organizations (ENGOs) and

Factors that Affect Decision-Making (cont'd)

universities in discussions of economic instruments as they are all stakeholders and will be affected by the implementation of any economic instruments. The CPA maintains its participation and input are essential as policies on economic instruments would have considerable impact on the upstream petroleum industry.

The areas of investigation the CPA particularly supports are the use of economic instruments to:

- help prioritize environmental problems and determine the costs and benefits of rectifying them. With finite financial resources, Canada needs to approach the most pressing problems first.
- minimize cost of achieving environmental targets
- reward environmental initiatives and encourage new financing for environmental investments
- minimize regulatory complexity

Areas of Concern

The CPA contends that, to be effective, investigations of economic instruments must consider all environmental, financial and social costs and benefits. It is known that some environmental protection measures will be expensive, but the full costs and benefits are not known.

A major concern with economic instruments is that they may reduce Canada's competitiveness in the global marketplace. If competing countries do not impose similar environmental controls, Canada will be placed at an economic disadvantage.

The CPA does not believe economic instruments should be studied in isolation of traditional regulatory methods of pollution control. Environmental protection is likely best achieved through a combination of economic instruments and the traditional regulatory methods.

Factors that Affect Decision-Making (cont'd)

No matter which methods are used, it is strongly suggested that any revenues raised from them be committed to environmental protection programs, rather than be added to general government revenues.

2. **University Network Research Program on Application of Economic Instruments**

Areas of Support

The CPA supports a university network research program as it is one means of stimulating research on types of economic incentives, their implementation and their consequences.

Areas of Concern

If an university network research program is initiated, the CPA requests the upstream petroleum industry be included in planning the research. Economic instruments could impact industry members heavily.

It is also important the proposed university network research program be sufficiently funded to properly evaluate economic instruments, and be properly directed and managed to avoid duplication of effort. Input by the upstream petroleum industry into the research program would prevent overlap with industry research efforts.

Background

The CPA supports research into economic instruments to the extent that it is organizing and jointly funding with the Alberta government, its own feasibility study of permit trading in Alberta. The study will address such issues as how a market-based approach would work in the province, allocation of permits, and requirements for additional monitoring.

Changing Decision-Making Processes

A. Government Review and Modification of Policies, Laws and Regulations

Areas of Support

The CPA strongly supports the federal government's proposal to conduct a systematic review of policies, laws and regulations and to propose modifications as necessary.

Areas of Concern

Increased regulatory efficiency was promised as followup to the Neilsen Task Force report; however, the upstream petroleum industry has seen little evidence of progress in this area.

To ensure progress with this initiative, the CPA recommends the federal government include in its policies a requirement for regular reviews. As well, rather than being broad-based, new or modified regulations should be tailored to meet specific needs or deal with specific problems. For example, Transportation of Dangerous Goods regulations were originally developed to address transportation disasters, yet the final regulations went so far as to include the transportation of very small quantities of dangerous goods in pickup trucks.

The CPA believes any review of government policies, laws and regulations must include the various stakeholders, particularly those in the private sector who may be directly affected by modifications. The CPA also recommends the government institute a mechanism for monitoring the impact of modifications, particularly increases in costs to the private sector.

Background

In the past, the CPA has participated in discussions with government on oil-base drilling mud guidelines for the east

Changing Decision-Making Processes (cont'd)

coast and more recently, the offshore waste disposal guidelines and the Northern Inland Waters Act. The process was very positive. Other CPA activities related to the review of regulations include participation in the Neilsen Task Force, input into regulation of EARP and participation on CEPA and various government/industry working groups.

B. Government Adoption of Code of Environmental Stewardship

Areas of Support

The CPA supports the proposal that government adopt a code of environmental stewardship that will set specific goals and establish operating procedures. The CPA has had its own Environmental Code of Practice since 1988 and its Environmental Operating Guidelines since 1980, and has found them to be effective in improving environmental protection.

Areas of Concern

No concerns.

Background

Environmental codes of practice are management tools for promoting the establishment of goals and operating practices. The CPA developed its "Environmental Code of Practice for the Canadian Petroleum Industry" to promote protection of the environment, human health and safety. A code by itself is not enough, however, and must be buttressed by guidelines for operations such as those already established by CPA, including the "Environmental Operating Guidelines for the Alberta Petroleum Industry," and guidelines for public consultation, environmental auditing and waste management.

Establishment of similar initiatives by government would provide leadership and technical advice on ways to move toward sustainable development in Canada.

Changing Decision-Making Processes (cont'd)

C. Compulsory Environmental Audits for Industry and the Government; Publicized Results

Areas of Support

The CPA supports the concept of environmental audits as good management tools, useful to both industry and government; however, the CPA does not believe audits should be compulsory or the results publicized.

Areas of Concern

Environmental audits are useful tools that should be encouraged, but the upstream petroleum industry is concerned that the process could become confrontational and ineffective if audits are made compulsory by government. Compulsory audits would only serve to ensure compliance and would not encourage industry to further improve its environmental protection efforts.

The CPA is also concerned that publication of environmental audit results could compromise corporate confidentiality and be self-incriminating. Also, environmental audits currently are specific in scope and would require standardization before results could be considered meaningful to the public. Summaries of audit results could be publicized in the future; however, before doing this the CPA recommends corporations carefully examine all issues of confidentiality and public disclosure.

Background

Consistent with the CPA's "Environmental Code of Practice" is the CPA recommendation that member companies conduct systematic environmental audits. The CPA views environmental audits as key components for good business planning because they function as an early warning system, ensure compliance with regulations, verify effectiveness of

Changing Decision-Making Processes (cont'd)

management's environmental policy, furnish information for insurance programs, identify opportunities for cost savings and improve public relations.

In its "Environmental Audit Guidelines for the Petroleum Industry" the CPA states: "Member companies of the CPA have a direct, vested interest in continuing to stay abreast of regulatory standards. Environmental audit processes are one important tool available to oil and gas companies to maintain a clear, managed approach to regulatory requirements. Audits provide management with a concise, regular summary of environmental problems and risks attendant with ongoing field operations. They also provide a continuity of records and internal environmental surveillance records, which may be essential in establishing due diligence in future possible regulatory initiatives."

Strengthening Partnerships

A. Strengthening Government Support of International Efforts to Address Environmental Problems

Areas of Support

The CPA supports, in principle, the government's proposal to strengthen its support of international environmental efforts. However, it strongly urges the government to consult with the private sector before making binding commitments to international agreements and accords.

Areas of Concern

The government needs to increase consultation with the private sector as some recent government commitments to global environmental protection, with large implications to industry, have been made without prior consultation with industry. Financial impacts of these commitments on industry justify the need for consultation allow industry to comment on and prepare for the impacts.

Strengthening Partnerships (cont'd)

B. Strengthening Federal, Provincial and Territorial Cooperation on Environmental Efforts

Areas of Support

The CPA supports the government's commitment to strengthen cooperation among jurisdictions, particularly to reduce duplication.

The CPA also agrees regulatory uncertainty must be reduced to ensure rules are applied commonly to all stakeholders.

Areas of Concern

The commitment to greater cooperation was also made following the Neilsen Report; to date, little evidence of it has been seen by the upstream petroleum industry.

Industry believes it should have a voice in this effort in all areas where it may be affected. Key areas where the upstream petroleum industry wishes to be involved are:

- the development of a coordinated integrated approach to regulatory and review processes on frontier lands
- the development of consistent standards and procedures in all jurisdictions in land claims settlement areas
- the resolution of jurisdictional conflict among National Energy Board, Federal Environment Assessment Review Office, and regional offshore boards in addressing offshore pipelines

The CPA also believes the regulatory responsibility of native groups as a result of land claims settlements should be recognized in this process; this responsibility is not recognized in the *Framework for Discussion*.

Strengthening Partnerships (cont'd)

C. Administrative Agreements Between Federal and Provincial Governments on Common Environmental Concerns

Areas of Support

The CPA supports establishment of administrative agreements between federal and provincial governments that minimize or eliminate duplication. The CPA also agrees the federal government needs to establish national minimum standards.

Areas of Concern

The CPA recommends the private sector be included in the development of nationally applied standards. In addition to national minimum standards, the CPA recommends provinces establish more restrictive standards where environmental circumstances warrant. Industry believes this split approach to standards will help governments avoid creating global solutions for local problems.

D. Ways to Forge More Effective Partnerships

Areas of Support

The CPA believes more effective partnerships can be forged if government increases and improves mechanisms for meaningful consultation, particularly in the early stages of any initiatives that may have impacts on the private sector.

Areas of Concern

Currently, consultation of the Canadian Council of Ministers of the Environment with industry association and the public is insufficient.

Strengthening Partnerships (cont'd)

E. Ways for Government to Increase Effectiveness of ENGOs

Areas of Support

The CPA believes all groups with environmental concerns should be included in improvement efforts and therefore supports government endeavours to maximize the effectiveness of ENGOs.

Areas of Concern

To increase the effectiveness of ENGOs working in partnership with the private sector, the government must promote ENGO activities by providing access to technical, organizational, management and communication expertise, and where appropriate, financial support. The issue of who receives funding will require careful consideration.

The government also needs to increase the effectiveness of other stakeholders, including the private sector.

Background

Historically, the primary role of ENGOs has been to act as special interest lobby groups. Increasingly, ENGOs are taking more active roles in working directly with the private sector on a variety of joint interest projects. These types of partnerships dealing with sustainable development should be encouraged and can be encouraged if government provides its support.

F. Environmental Promotions

Areas of Support

The CPA supports the concept of promoting the benefits of environmentally sound decision-making to Canadians.

Strengthening Partnerships (cont'd)

Areas of Concern

The CPA supports promotion of voluntary participation (as with fitness PARTICIPACTION promotions) in environmental protection at the community level, but is concerned that it may lead to substantial bureaucracy and costs. The costs and administration for such a program should be kept to an absolute minimum, and existing mechanisms and networks should be used wherever possible.

Background

The CPA regularly provides background information on upstream petroleum development to individuals, schools and organizations. It could expand that initiative to include related environmental information. The CPA also participates in Environment Week.

G. Establishment of Environmental Advisory Committee of First Nations

Areas of Support

The CPA fully supports initiatives that would draw upon the experience of aboriginal people and their close relationship with the land and the environment.

Areas of Concern

Given the progress of land claim settlements and the associated establishment of regional management authority over the lands involved, the environmental advisory committee initiative would seem better targeted at the regional level. The CPA believes this strategy has the potential for maximum effectiveness while minimizing duplication. The proposed advisory committee would risk adding yet another layer to an already complex system, and one that would be far removed from those who ultimately feel the effects of decisions.

Strengthening Partnerships (cont'd)

H. Consultation with Aboriginal People

Areas of Support

The CPA strongly supports efforts to improve government consultation and communication with Canada's aboriginal peoples, particularly initiatives that draw on the experience of aboriginal people in their close relationship with the land and environment.

The CPA also agrees inclusion of natives in proposed government youth initiatives would add value to this initiative.

Areas of Concern

The CPA believes respecting and maintaining the traditional relationship of native peoples to the land must include consultation whenever new economic options are introduced to native areas.

Background

The upstream petroleum industry operates in many areas populated by aboriginals. Ongoing consultation between industry and aboriginal communities provides an important means for ensuring cooperative coexistence that avoids disruption of traditional aboriginal land uses.

ACTION ON ENVIRONMENTAL ISSUES

ENVIRONMENTAL STRESSES

Toxic Substances

A. More Rapid Assessment of Priority Substances

Areas of Support

The CPA does not support more rapid assessment of priority substances.

Areas of Concern

Time must be taken to do thorough assessments of priority substances, and delays should be imposed if data is not available for a defensible risk assessment. Existing data on toxic substances should be used as much as possible, as this could reduce assessment time.

Background

Environment Canada has established very detailed guidelines upon which toxic substances, priority substances and other types of substances are to be evaluated and assessed. CPA feels that four years is an appropriate time frame, possibly even optimistic, for Environment Canada and Health and Welfare to conduct these assessments and complete Priority Substances Reports for the 44 priority substances currently listed.

B. More Comprehensive Monitoring of Toxic Substances

Areas of Support

The CPA supports the government in requiring more comprehensive monitoring of toxic substances wherever the actual risk to Canadians is high and where current information is insufficient. Data from monitoring is an important component of a thorough risk assessment.

Toxic Substances (cont'd)

Areas of Concern

Additional monitoring must be based on actual rather than perceived environmental or health risk to Canadians. Scientific studies must be used to determine that the risk is real and that additional site-specific monitoring is required.

C. More Research on Toxic Substances

Areas of Support

The CPA supports more research on high-risk toxic substances for which there is currently not enough information for evaluation under Environment Canada guidelines. Additional research for substances on the Priority Substances List is otherwise not supported. It could result in some toxic substances not getting the attention they crucially require.

Areas of Concern

The CPA is concerned that unnecessary work will be done on toxic substances when current information is adequate. This could delay issuance of Assessment Reports and subsequent Control Option Reports.

D. Development of National Toxicology Network

Areas of Support

The CPA supports government establishment of a National Toxicology Network among government, industry and universities across Canada. The ability to rapidly exchange toxicological information is important to all Canadians, particularly during emergencies.

Toxic Substances (cont'd)

Areas of Concern

The network will be very useful; however, developing, implementing and maintaining it will require a coordinated effort and a great deal of time and money. Who will pay for this network, the users or all Canadians?

The CPA is concerned that existing facilities, such as the Canadian Centre for Occupational Health and Safety in Hamilton, be integrated into the network.

E. National Standards for Toxic Substances under CEPA

Areas of Support

The CPA promotes self-regulation and supports developing national standards for effluents and toxic wastes only where the following approaches to control prove to be ineffective:

- industry codes of practice
- national guidelines

Areas of Concern

The CPA accepts that certain standards are necessary components of environmental management. The CPA is concerned, however, that national standards may be proposed for local problems. National minimum standards should be sufficient for most situations and stricter standards should be applied provincially or regionally if required by provincial or regional environmental conditions (such as for protection of air and water quality).

The CPA requests that standards be developed in full consultation with all levels of government, industry and the public. The upstream petroleum industry feels its participation from the very beginning is vital, to anticipate socio-economic impact and implement measures most cost efficiently.

Toxic Substances (cont'd)

Background

National standards should be considered where it can be clearly demonstrated that implementation will have a significant positive impact on human health or the quality of the Canadian environment. This impact can only be demonstrated by thorough evaluation of technical data, including quantitative risk assessments, social impact, and economic impact. The logistics of ensuring compliance must also be taken into consideration.

A mechanism for prioritizing the process of setting standards will have to be established, to ensure efforts in standard development and subsequent compliance have net positive impacts on society. The CPA will support research in high-priority areas relevant to the upstream petroleum industry.

Any U.S. or European standards being considered for adoption in Canada must be assessed for their relevance to the Canadian environment. For instance, some U.S. fuel standards may not be applicable to Canada's cold weather conditions.

Where technology is currently insufficient to allow compliance, the CPA recommends using innovative strategies such as multi-tiered standards, to allow for step-by-step reductions. This will enable stakeholders to efficiently develop appropriate methods to ensure compliance.

Performance standards are preferred as they are inherently more flexible than specification standards for control technology.

F. Options for Companies that Cannot Afford New Environmental Measures

Areas of Support

The CPA supports government assistance for companies that cannot financially meet their obligations to protect the environment.

Toxic Substances (cont'd)

Areas of Concern

The CPA is concerned that policies and regulations, even if applied fairly and commonly to all parties, may cause companies to suffer economic hardships from which they are unable to recover. Overall costs and benefits of environmental policies should be assessed, and action taken to maximize these benefits, such as providing longer phase-in periods or assistance to hardship cases. Whatever policies are adopted in this regard, they should not condone poor environmental practices.

Waste Management

A. Office of Waste Management that Promotes Recycling and 50 Percent Reduction in Waste

Areas of Support

The CPA agrees with the promotion of waste reduction and recycling, but feels the feasibility of 50 percent waste reduction by the year 2000 needs to be evaluated. The CPA also agrees with the establishment of a government Office of Waste Management to promote and coordinate waste management activities; however, greater efforts will likely be needed to achieve the target waste reduction.

The Office of Waste Management should focus on setting goals, coordinating and monitoring reduction efforts and reporting successes in conjunction with other levels of government, with industry and with industry associations.

Areas of Concern

The 50 percent waste reduction target by the year 2000 does not appear to have been assessed for feasibility. For example:

- the full costs of all waste management measures must be determined and agreement obtained on the distribution of costs. There will be costs for increasing efforts and for

Waste Management (cont'd)

measuring progress toward the established goal of waste reduction.

- the CPA questions how a baseline will be established from which to measure the percent reduction

The CPA further suggests that to achieve a waste reduction target, waste management must be coordinated among all waste generators and waste management facilities, with consideration given to technology, economics and markets for recyclable goods. A phased and coordinated approach is essential.

Another concern is that all levels of government and industry must work together in determining adequate definitions for hazardous wastes, to avoid incorrect classification and processing of waste.

Background

The CPA is a strong proponent of responsible waste management. A CPA-sponsored audit of waste management facilities in Alberta is currently underway to ensure they meet standards expected by the upstream petroleum industry.

The CPA is also developing waste management guidelines that will help the upstream petroleum industry improve waste reduction and recycling alternatives and identify responsible treatment and disposal for waste produced in oil and gas production. The guidelines will include details on the Workplace Hazardous Materials Information System and transportation of dangerous goods.

One of the solutions proposed by the CPA to improve recycling is the classification of hazardous wastes based on their environmental hazards. Hazardous waste classification in Alberta is presently based on transportation criteria for worker safety, under the Transportation of Dangerous Goods Act. Under this system, oilfield wastes are often

Waste Management (cont'd)

inappropriately treated as hazardous where they could safely be treated as non-hazardous. These wastes should be further classified for their environmental hazards.

B. Addressing Public Concerns in Locating Waste Facilities

Areas of Support

The CPA strongly supports the location of hazardous waste management facilities in Western Canada, along with the requirement that locations be chosen on the basis of accurate scientific information, public consultation and efficient environmental review.

Both the public and the upstream petroleum industry must be assured that wastes are being disposed of properly.

Areas of Concern

Although the CPA supports public consultation and environmental assessment for determining locations of waste management facilities, its concern is that the present review process takes too long; this process must be shortened and must appropriately address the issues. The timely distribution of accurate information to the public is critical to the public's acceptance of these facilities.

The CPA is concerned about the unavailability and limited capacity of hazardous waste management facilities. This situation leads to increased storage time for these wastes with the potential for accidental spills and human exposure.

Also of critical importance is that, once these facilities are sited and operational, they must be controlled and adhere to strict guidelines developed by both industry and government.

The CPA proposes that federal and provincial governments cooperate in the development of waste management programs; waste management is presently a provincial responsibility.

Waste Management (cont'd)

Background

The CPA's concern that waste management facilities are operated properly has led them to audit the waste management facilities in Alberta, to ensure they meet standards expected by industry. Initial results from this assessment have indicated that, although many of the facilities are approved by government agencies, they do not manage the waste material in an environmentally acceptable manner. It is very important that facilities adhere to strict government-industry guidelines.

Environmental Emergencies

A. Upgrading Ability to Provide Timely Warnings of Natural Hazards (e.g., blizzards, tornados and marine storms)

Areas of Support

The CPA supports the government's initiatives to improve techniques for understanding and detecting natural hazards. The upstream petroleum industry has a particular interest in better and longer-range forecasting for exploration and production work in isolated offshore areas, and would like to see increased forecasting in conjunction with PERD and ESRF programs.

The CPA further supports this initiative as it relates to planning, in particular housing and construction in floodplain areas.

Areas of Concern

The CPA wishes to remain an active participant in consultations with government and would like to have input into determining which areas will be studied.

Background

The CPA will continue to support relevant research and development work through the PERD program. It will also

Environmental Emergencies (cont'd)

continue its involvement in baseline studies programs such as the Eastern Arctic Marine Environmental Study (EAMES) and the Offshore Labrador Studies (OLABS), and in programs such as the Northern Oil and Gas Action Plan (NOGAP) and ESRF, which are designed to facilitate government preparedness and decision-making related to oil and gas activities on frontier lands.

The CPA supports continued government initiatives through PERD, such as the Canadian Atlantic Storm Project (CASP I and II).

B. Enhanced Education About Impacts of Severe Weather

Areas of Support

The CPA supports government plans to improve public education on the impacts of severe weather on pollution emergencies (i.e., severe weather can both cause and complicate emergencies).

Areas of Concern

No concerns.

C. Introduction of a Government Environmental Emergency Program

Areas of Support

The CPA supports the government's introduction of a comprehensive Environmental Emergency Program that covers the production, transportation and disposal of oil, chemicals and other potentially hazardous substances.

However, the upstream petroleum industry should retain the responsibility for managing responses to exploration and production oil spills, unless it requests additional assistance or is not capable of managing the emergency.

Environmental Emergencies (cont'd)

Areas of Concern

The CPA would like clarification of the role of the government in emergency response and the intent and scope of the government's emergency response program. With this knowledge, the CPA can determine how best the upstream petroleum industry can coordinate emergency response efforts with government.

In developing its plan, CPA recommends government incorporate the TFOSP recommendations on oil spill preparedness and emergency response (i.e., 1-800 numbers, remote equipment, contingency plans, etc.). CPA also recommends that government work with other countries to develop common standards for prevention and response to marine oil spills, and that these standards be used in developing the emergency response plan. CPA would also like the government's plan to include detailed response procedures on:

- providing logistics, communication and accommodation for government response personnel and scientists in remote locations
- coordination of government operational and scientific staff with those responsible for the response to ensure most effective use of scarce transportation and other equipment
- providing industry on-scene-commanders access to government experts and equipment
- direction of military personnel by the on-scene-commander
- volunteer training and participation

Background

The upstream petroleum industry has a long history of environmental research and emergency response planning, including extensive work in the Beaufort Sea area. Also, the

Environmental Emergencies (cont'd)

upstream petroleum industry's state of preparedness for oil spill response has recently been evaluated by the TFOSP and the resulting recommendations are being implemented.

The upstream petroleum industry also has conducted and continues to conduct and fund a significant amount of research to advance knowledge and skills related to oil spill prevention and cleanup.

The upstream petroleum industry has used volunteers effectively in oil spill response and cleanup. The government can obtain information on industry volunteer programs from oil spill cooperatives, the Transportation Emergency Assistance Program and the Community Awareness Emergency Response.

The Health Dimension

A. Initiatives Related to the Linkage Between Environmental Problems and Health

Areas of Support

The CPA supports the government's increased commitment to health concerns when addressing environmental problems. The basic assumption that human health will benefit from a healthy biophysical environment in a sustainable economy is strongly endorsed by the CPA. Recognition of the multidimensional aspects of human health, as in the *Framework for Discussion,* permits priority setting based on the common good rather than attention-grabbing causes.

The CPA believes clinical, toxicological and epidemiological research is required to assess and manage human health risks associated with environmental factors. Such research must be integrated and directed toward the management of environmental human health risks. Centres of excellence should be identified and their research supported, if the centres accept direction and coordination from multistakeholder discussions on environmental health and research.

The Health Dimension (cont'd)

The CPA recognizes the complexity of links between the environment, economy and health, and is committed to protecting the health of Canadians. This commitment will include working more closely with governments and the health and scientific communities on health issues.

The CPA believes the overall quality of scientific work should be enhanced, and recommends that university or privately based centres of research be developed. Priority should be given to research of health hazards rather than to the most controversial issues, which sometimes pose less serious risks.

Areas of Concern

The CPA believes a focus must be provided for environmental health activities either through increased involvement of the Department of National Health and Welfare or the creation of a health agency. The mandate of this agency would be to provide or coordinate human health expertise for the identification and management of environmental human health issues.

Health initiatives need to be directed toward a series of specific issues:

- more sophisticated ways to measure public health threats
- the prediction of possible health effects from exposure to environmental toxicants
- the development of an open and flexible process for managing environmental health risks. The process must include consideration of both social and economic costs and benefits.

The CPA also advises that health issues must be addressed consistently in the various pieces of legislation under which they are or will be governed (such as CEPA, the Environmental Assessment Act and proposed drinking water and pesticide legislation).

The Health Dimension (cont'd)

Background

There is a direct correlation between economic status and health of the population, as increasing costs of health care can only be met by maintaining a robust economy. It is also recognized that a compromised environment will result in a less healthy population. The challenge, therefore, is to identify and prioritize potential health risks relating to environmental issues, and to manage those risks with consideration of all possible short- and long-term economic consequences.

THE GLOBAL COMMONS

Atmospheric Change

A. Global Warming

1. Establish a Centre for Climate Change Research

Areas of Support

The CPA supports the idea of a Centre for Climate Change Research to obtain more information on the effects of global warming. The CPA agrees the centre should focus on the impacts of climate change on Canada.

The CPA also supports study of methods for moderating the identified impacts, and the development of these methods, if they are not now available.

Areas of Concern

The research conducted by a Canadian centre should be closely coordinated with research by other national and international centres. Research should not duplicate costly research being conducted in the U.S. and England.

Atmospheric Change (cont'd)

Background

Canada and other countries must increase their understanding of global warming and the complex interrelationships between greenhouse gases, clouds and oceans. Increased knowledge will allow accurate prediction of climatic trends and their effects on the regions of Canada and the world.

Research specifically on the effects of climate change in Canada would provide information on the effects of global warming in Canada. Such research would help Canadians prepare for the effects of any climate changes and perhaps reduce negative impacts.

Because of the significance of global warming, the CPA has established a Global Warming Task Force, which has an extensive plan over the next two years of studying current scientific information and determining what actions the upstream petroleum industry should take to respond to the situation.

2. Greenhouse Gas Emission Targets for Canada

Areas of Support

The CPA does not support specific target reductions in greenhouse gas emissions.

Areas of Concern

The CPA does not support specific target reductions as scientific knowledge is not complete enough to determine feasible and effective target levels.

Instead of supporting target emission levels, the CPA supports energy conservation by upstream petroleum industry operators and consumers, to reduce greenhouse gas emissions (CO_2, NOx, CH_4). A strategy of conservation and reporting similar to that established in the mid 1970s by the Canadian

Atmospheric Change (cont'd)

Industrial Program for Energy Conservation would be effective. Strategies should be devised through joint discussions between the upstream petroleum industry and government, with consideration of economic instruments, new technologies and regulation.

Background

The link between carbon dioxide emissions and global warming is not well established or understood; therefore, it is difficult to establish feasible or effective emission target levels. While the situation is being assessed, it does make sense to conserve energy to reduce greenhouse gas emissions. Energy conservation also makes sense for the purposes of reducing costs and prolonging the life of non-renewable resources.

Carbon dioxide is the most abundant of greenhouse gases, and one of its main sources from human activities is the burning of fossil fuels. The volume of greenhouse gases in the atmosphere has increased markedly over the last several decades; in the future, carbon dioxide emissions are estimated to increase 50 percent from 1988 to 2005. Energy conservation will help reduce these projected increases in greenhouse gases.

3. **International Action to Control Greenhouse Gases**

Areas of Support

The CPA strongly agrees that global warming is an international problem and concurs with the government's desire for a global convention on climate change.

Areas of Concern

Anything other than an international approach would be impractical and ineffective. Unilateral action by Canada to

Atmospheric Change (cont'd)

reduce greenhouse gas emissions would put Canada at an economic disadvantage with competing countries, which could weaken the Canadian economy.

Background

Canada alone cannot reduce the degree of global warming by decreasing greenhouse gas emissions because it produces only two percent of global carbon dioxide emissions. No one country is a dominant contributor.

4. Many Mechanisms to Achieve Greenhouse Gas Reductions

Areas of Support

The CPA supports investigation of all possible mechanisms for promoting reductions in greenhouse gas emissions. Some options for promoting reduction are those discussed under Economic Instruments on page 35. Additional options are conservation, curtailment of demand, lifestyle changes, efficiency improvement in hardware, recovery for alternate use, recovery for storage, alternative non-carbon sources of energy and biological consumption of carbon dioxide (e.g., use of trees as carbon sinks).

Areas of Concern

Mechanisms to reduce greenhouse gas emissions should remain in place until either economic or scientific evidence shows they are not needed.

All possible methods of reducing greenhouse gas emissions should be assessed to determine the best method of achieving results. A multi-faceted approach may be necessary.

Atmospheric Change (cont'd)

Background

The CPA supports promoting energy conservation to individual Canadians as well as to industry because 80 percent of Canadians believe reducing greenhouse gas is a very important issue, but only 10 percent think their activities have anything to do with it.

5. **Roles of Nuclear Energy, Hydro-electric Power, Energy Efficiency and Alternative Energy in Reducing Greenhouse Gases**

Areas of Support

Alternative energy sources should be assessed for their possible use in reducing greenhouse gas emissions.

Areas of Concern

Each alternative energy source should be assessed not only for its role in reducing greenhouse gas emission, but also for other environmental implications. There are environmental implications for each energy source mentioned.

Background

It is only prudent to ensure suitable energy alternatives are available for the future. As well as being needed to reduce global warming, alternative fuels may be needed to reduce air pollution and meet national energy requirements.

6. **Consistency of Energy Megaprojects with Reductions in Greenhouse Gases**

Areas of Support

The CPA believes energy megaprojects that, during exploration, transporting and manufacturing, produce fuels

Atmospheric Change (cont'd)

with lower carbon emissions, are consistent with reductions in greenhouse gas emissions.

Areas of Concern

Even the megaprojects that produce fuels with high carbon dioxide emissions are necessary until alternative fuels are found. Canada must ensure its energy supply is maintained to avoid the very serious consequences of fuel shortages.

The wide diversity of types of energy megaprojects requires individual assessment of each project's economic, environmental and social impacts. Impacts should be examined on a national, regional and local basis.

B. Ozone Depletion

1. Eliminating Canadian Production and Importation of Chlorofluorcarbons (CFCs) and other Ozone-Depleting Substances by 1999

Areas of Support

The CPA supports eliminating production and importation of ozone-depleting substances where there are suitable, environmentally friendly substitutes. It also proposes the following actions to better manage existing supplies of CFCs:

- conserve existing inventories of CFCs by reducing leaks and venting
- stop live testing of halon units
- develop technology to recover, store and render harmless CFCs from defunct systems (e.g., refrigerators, air conditioners and fire-fighting equipment)

The CPA encourages research efforts to find an environmentally acceptable substitute for halon.

Atmospheric Change (cont'd)

Areas of Concern

It is not clear whether presently planned substitutes for freon will be the long-term solution, as the substitutes are powerful, persistent greenhouse gases.

Once environmentally acceptable substitutes are found, the CPA recommends that existing facilities and equipment be converted, using proper techniques for recovery and destruction of CFCs and ozone-depleting substances. Conversion without proper recovery and destruction could be more harmful than continued careful use.

Background

In September, 1987, Canada and 24 other nations signed the Montreal Protocol on Substances that Deplete the Ozone Layer, an international treaty to reduce global consumption of ozone-depleting substances. The Montreal Protocol came into force January 1, 1989, and requires that Canada stabilize halon consumption at 1986 levels by 1992. As a result of the concerns, manufacturers, primarily Dupont, have committed to stop the manufacture of halon by the year 2000 or before, if a suitable alternative can be found.

The CPA encourages its member companies to limit use of halon as a fire suppressant to situations where there is no practical or safe alternative. Although there are no controls mandated until 1992, the CPA proposes voluntary reduction of halon use as follows:

- for fire extinguishers:
  - replace halon fire extinguishers with appropriate substitute materials once they have been discharged
  - return spent halon fire extinguishers to the supplier
  - ensure suppliers arrange for appropriate recycling, recovery or destruction of halon

Atmospheric Change (cont'd)

- for existing fixed installations:
  - continue to use halon until an acceptable substitute is found
  - ensure proper maintenance on fixed installations to eliminate leakage or false discharge
  - test the systems without releasing halon
- for new installations:
  - use acceptable alternative substances or systems as recommended in "Best and Essential Halon Use Methodology" published by the National Fire Protection Research Foundation

2. Increase Ozone Research and Establish Arctic Ozone Observatory

Areas of Support

The CPA does not support increased ozone research or the establishment of an arctic ozone observatory as high priorities at the present time.

Areas of Concern

The CPA feels that research in carbon dioxide emissions, NOx and VOCs is a much higher priority than ozone research.

The CPA also feels that existing facilities or the proposed Centre for Climate Change Research could be used for any ozone research that might be undertaken.

Atmospheric Change (cont'd)

C. Acid Rain

1. Sulphur Dioxide Emission Agreements for Western Canada

Areas of Support

The CPA does not support sulphur dioxide emission agreements for Western Canada.

Areas of Concern

The CPA does not feel sulphur dioxide emission agreements or caps are necessary for Western Canada. The region does not have acid rain problems and the upstream petroleum industry has good controls on sulphur dioxide emissions to prevent acid rain from becoming a problem.

Background

The ADRP, an $11 million, five-year study released in 1988, reported that acid rain is not a concern in Western Canada. Funded by the CPA and other stakeholders, the project based its results on extensive study of biophysical and medical effects of air emissions in Alberta. The study received acclaim from scientists and scientific organizations around the world.

Acid rain is not a problem in Western Canada partly because the upstream petroleum industry has prepared and follows state-of-the-art guidelines for sulphur emissions. These guidelines have been made more stringent three times since their first publication in the 1960s.

The upstream petroleum industry has also adopted lean-burn technology for its compressor drivers. Although this is largely to control NOx emissions, it will also reduce sulphur dioxide emissions.

Atmospheric Change (cont'd)

2. Work in Addition to Research on Long-Range Transport of Airborne Pollutants in Western Canada

Areas of Support

The CPA does not support additional work on acid rain for Western Canada.

Areas of Concern

The CPA does not support additional work on acid rain in Western Canada as the ADRP (described in number 1 above) reported that acid rain is not a concern for Western Canada.

Background

See number 1 above.

Water

A. Increased Research on Water Pollution

Areas of Support

The CPA supports increased research on water pollution with emphasis on toxics, including long-term acceptable levels for toxic compounds in surface waters and waters used for human consumption, livestock and irrigation. A special focus for Canadian research should be the effect of spring-melt waters on our streams, lakes and oceans in both southern and northern regions of Canada.

Areas of Concern

Any government research initiatives should be planned in concert with industry.

Water
(cont'd)

B. Increased Monitoring and Forecasting of Water Quality and Quantity

Areas of Support

The CPA supports increased monitoring and forecasting of trends in water quality and quantity. It also recommends providing this information to the public on a continuing basis.

Areas of Concern

No concerns.

Background

A significant amount of Canadian and international research has been conducted on water quality and the effects of water quality on plants, animals and water body ecosystems. Increased monitoring of water quality would add to the growing base of knowledge. In fact, current technology can measure trace compounds in such minute quantities that science does not yet have the ability to interpret the significance of these levels.

C. Preparation of National Water Atlas

Areas of Support

The CPA does not support the preparation of a national water atlas. No indication is given in the *Framework for Discussion* on its intended content or use, and the CPA is concerned that it could be redundant.

The CPA alternatively proposes a short-term (e.g., quarterly) system of data display on both the quality and quantity of ground water and surface water, to support ongoing decision making.

Water
(cont'd)

Areas of Concern

The CPA is concerned that a national water atlas would be difficult to keep current, and feels water data collected in Canada must be kept current in a sophisticated data analysis and presentation system, to enhance the ability to forecast water quality trends. This water quality data should be used as part of frequent state-of-the-art environment reporting.

The CPA feels more information is needed on ground water, and would find an atlas on ground water useful.

D. Development and Demonstration of Water-Saving and Non-Polluting Technologies

Areas of Support

The CPA supports promoting the development and demonstration of water-saving and non-polluting technologies, and suggests an organization such as PERD could effectively direct water-related research. Water-management technology may be developed through government research, shared research by governments, or research by private industry.

Areas of Concern

The CPA requests government use a consultative approach with industry in researching and developing water-saving and pollution-reduction technologies.

Background

CPA member companies have been actively involved in research on water-saving and non-polluting technology for a number of years. A coordinated approach, using an organization such as PERD to direct research, will help ensure prioritization and cost-effective management of projects. The CPA is represented on PERD, and can provide

Water
(cont'd)

technical direction on research initiatives that relate to the upstream petroleum industry.

E. Development of a Drinking Water Safety Act

Areas of Support

The CPA supports the creation of a Drinking Water Safety Act.

Areas of Concern

The CPA recommends that the health community be consulted to help determine standards for safe, clean water.

F. Development of a Canada Oceans Act

Areas of Support

The CPA supports, in principle, the development of a Canada Oceans Act as it will provide needed commitment to research for improved understanding of Canada's ocean environment, including renewable resource use and patterns.

Areas of Concern

One concern in developing the legislation is that regulations address scientifically assessed risks, rather than perceived risks. In the past, some regulations, such as those requiring monitoring of drilling muds for disposal in frontier areas, are stricter than are required for environmental protection.

The CPA requests involvement in prioritizing and focusing research that will result from a Canada Oceans Act. The CPA supports continued efforts through PERD, ESRF, NOGAP, and other vehicles to provide focus for research effort. One area considered important is the identification of prime fish habitat.

Water (cont'd)

G. Economic Instruments to Encourage Environmentally Sound Water Management

Areas of Support

The CPA supports use of economic instruments for their effectiveness in promoting environmentally sound water management; however, any measures must be applied equitably with consideration of their effects on water users.

The CPA would be interested in participating in a national conference on water management, particularly focusing on policies concerning the development and use of economic instruments.

Areas of Concern

The CPA feels it is important that consideration be given to the effects of economic instruments on water users. Water pricing, for example, could have significant impacts on established industrial water users, and phase-in periods should be created to allow adjustment to the added financial burden. Increased cost to industry could also increase costs to consumers.

The CPA also urges that any revenues collected by the government from water use charges or other mechanisms be committed to further water-protection programs, rather than to general government expenditures.

SUSTAINING OUR RENEWABLE RESOURCES

Agriculture

A. Promoting Soil Conservation

Areas of Support

The CPA supports additional joint industry-government activities that investigate and resolve issues associated with soil conservation during activities of the upstream petroleum industry.

Agriculture (cont'd)

Areas of Concern

The CPA is concerned with the over-regulation of soils conservation during upstream petroleum industry development. In Alberta, soils information gathered in advance of projects often exceeds requirements for good soil conservation. The CPA has been instrumental in maintaining open lines of communication on this issue at the provincial level but resolution is still required, with input from all parties.

Background

The construction of pipelines and related aboveground facilities, such as the installation of pump and compressor stations, has the potential to impact soil capability and productivity. To minimize effects on soil, CPA member companies have adopted a code of practice that protects soils through pro-active planning and mitigation measures. Since the early 1970s, member companies have practised topsoil conservation during the construction of new facilities. CPA member companies have also been active in environmental research to determine the optimum methods of topsoil conservation and reclamation.

Forests

A. Better Use and Protection of Canadian Forests

Areas of Support

The CPA supports the concept of integrated resource management in the planning of exploration, development and extraction of non-renewable resources within forested lands. Forests can be sustained during development of non-renewable resources and linear transportation corridors (i.e., pipelines).

Areas of Concern

No Concerns.

Fisheries

A. Additional Legislation for Protecting Fisheries

Areas of Support

CPA supports federal government protection of Canadian fisheries but does not support more stringent regulations than now exist. The current Fisheries Act adequately protects Canadian fisheries during activities of the upstream petroleum industry.

Areas of Concern

The CPA is concerned that fish habitat is protected to the point that it cannot be altered at all (as explained in Fisheries and Oceans' Fish Habitat Protection Policy). Some habitat may not be critical to the fisheries and could be altered without harm to the fishery. Increased efforts should be made to identify both prime and less valuable fish habitat.

Background

The CPA participated in the government's Arctic Marine Conservation Strategy workshop in Yellowknife. As one of many stakeholders, including the federal government, territorial governments, native groups, industry and a number of public interest groups, the CPA provided input into numerous recommendations on managing the arctic fishery.

The CPA has also formally responded to Fisheries and Oceans Fish Habitat Protection Policy.

B. Protection of Fish Habitat Where Provincial Authorities Administer Freshwater Fishery

Areas of Support

The CPA supports continuation of provincial government authority for the freshwater fishery.

Fisheries (cont'd)

Areas of Concern

The CPA feels local authorities are in the best position to administer the freshwater fishery.

Background

See Section A above.

C. **Priority Areas for Improving Fisheries and Oceans Science Capacity**

Areas of Support

CPA supports prioritizing areas of research for improving fisheries and oceans science capacity, but only with the input of all interested parties, including the upstream petroleum industry.

Areas of Concern

The CPA promotes a cooperative effort toward research to ensure the research is most practical and effective. Research should continue to be coordinated through PERD, ESRF and NOGAP.

Key areas for research include the separation of real from perceived impacts of industrial activities on the ocean environment and the identification of prime fish habitat.

Background

The CPA is currently involved in planning research through PERD, ESRF and NOGAP.

PRESERVING ECOLOGICAL AND HERITAGE RESOURCES

National Parks and Historic Sites

A. New National Parks and Completion of Parks System

Areas of Support

The CPA supports, in principle, the government's proposal to establish new national parks and complete the national parks system. The association agrees there is a need to protect parks and historic sites for future generations, and to preserve natural ecosystems and wildlife habitats as they are important reservoirs of natural species and gene pools.

Areas of Concern

CPA believes decisions to establish and develop parks must take into account all competing land uses and involve a more open consultative process with all stakeholders.

In particular, the CPA is very concerned that decisions on park locations will be made without an adequate accounting of the potential for oil and gas reserves and for pipeline transportation of oil and gas in those areas. The upstream petroleum industry relies on a limited supply of non-renewable resources and must be permitted to explore and develop within reasonable, scientifically supported limits.

Background

CPA has responded to the parks policy through meetings and correspondence with senior Parks Canada staff; however, Parks Canada has not expressed any interest in changing its parks selection process to include direct consultation with the private sector.

Wildlife

A. Program to Protect Wildlife and Wildlife Habitat

Areas of Support

The CPA supports federal efforts to implement new programs to protect wildlife populations and habitats. It further supports strengthening wildlife research and monitoring, and the coordination of governments, industry and universities on wildlife research.

Areas of Concern

There is, however, a need for both federal and provincial governments to objectively assess and prioritize all factors that impact wildlife. For example, hunting and tourism often have a larger impact than industry on wildlife -- yet more emphasis is placed on the industry because it has a higher profile and is easier to target and regulate. It is important that a wildlife protection strategy be developed within the context of sustainable development.

The CPA believes a rational protection strategy can only be developed through a better understanding of wildlife populations and their interaction with development activities. With this understanding, the government can prepare a strategy that provides protection rather than preservation. To concentrate on protection, research and monitoring should centre on industry activities that directly threaten locally uncommon, or regionally rare or endangered species, either by habitat fragmentation, potential harassment, or direct alienation from sites for spawning, breeding, nesting, rearing, yarding, and bottle neck migrating.

Background

The CPA actively participates in a variety of environmental and wildlife protection projects. Past and present projects include:

Wildlife (cont'd)

- the EAMES and OLABS programs as well as participation in programs such as ESRF, PERD and NOGAP
- the Beaufort and Mackenzie Valley Environmental Monitoring Projects managed by the Department of Indian Affairs and Northern Development
- a number of national and international research projects on the nature, habits and habitat of bowhead and beluga whales, polar bears, seals and other wildlife
- land-use planning projects such as those for Lancaster Sound and Beaufort Sea/Mackenzie Delta

B. Wild Animal and Plant Protection Act and Endangered Species Act

Areas of Support

The CPA supports the notion of a Wild Animal and Plant Protection Act and an Endangered Species Act; however with some reservations.

Areas of Concern

The scope of these acts is not clearly defined in the *Framework for Discussion*. More information is required before the upstream petroleum industry can respond in more detail.

C. Government Participation in Development of Global Convention on Biodiversity

Areas of Support

The CPA does not support government participation in the development of a global convention on biodiversity.

Wildlife
(cont'd)

Areas of Concern

The scope of this initiative is not clearly defined in the *Framework for Discussion*. More information is required before the upstream petroleum industry can respond in more detail.

PROTECTING THE ARCTIC ENVIRONMENT

A. Sustainable Development of Renewable Northern Resources

Areas of Support

CPA supports sustainable development of renewable resources in the arctic.

Areas of Concern

The CPA is concerned about the lack of emphasis in the *Framework for Discussion* on development of non-renewable resources. Research should be conducted, perhaps through NOGAP or PERD, to determine ways non-renewable resources could be developed while preserving the arctic ecosystem.

The *Framework for Discussion* mentions inclusion of only governments, non-governmental organizations and the public in planning sustainable development. The CPA stresses the importance of adding business and industry, particularly the upstream petroleum industry, to any consultations on sustainable development in the north.

Background

The CPA has been involved for many years in studies of resource development in the arctic. Some of these

PROTECTING THE ARCTIC ENVIRONMENT (cont'd)

studies have been through PERD, ESRF and NOGAP. Others include:

- the Lancaster Sound Green Paper, Lancaster Sound Land Use Plan, Mackenzie-Delta/Beaufort Sea Land Use Plan and Denendeh Land Use Plan
- the Beaufort Sea Environmental Assessment Review and Arctic Pilot Project Environmental Assessment Review
- numerous consultations with federal territorial and local government and Hunters and Trappers associations

B. Strategy for Dealing with Pollution Sources, Monitoring Arctic Ecosystems and Defining Protected Areas

Areas of Support

The CPA supports the government preparation of a Federal Arctic Environmental Strategy and research program that will include methods of dealing with pollution sources, monitoring arctic ecosystems and defining protected areas.

The CPA supports a research and monitoring program that would:

- determine the impact of contaminants to northern people and the arctic ecosystem
- monitor the arctic ecosystems to gain early knowledge about pollutants and their distribution

Areas of Concern

The CPA feels it imperative that the strategy and research program separate real from perceived concerns and then centre on real concerns.

PROTECTING THE ARCTIC ENVIRONMENT (cont'd)

The CPA also believes any areas excluded from development be carefully selected, using scientific knowledge and the guidelines for land use now being developed for the north. Serious consideration should be given to which areas are designated as protected because exclusion precludes flexible and multiple land use, potentially bringing economic detriment to a region.

Background

The CPA and member companies have had extensive experience in environmental concerns in the arctic. As well as those studies cited in Section A above, the upstream petroleum industry has:

- funded many studies on the impacts of various drilling chemicals and wastes to arctic fish and other organisms
- participated in the GNWT Water Board licensing procedure and conditions for drilling operations
- conducted research and monitoring studies on the distribution and movement of polar bears, whales, fish, seals and birds

C. Cleanup of Hazardous and Solid Waste Sites in the Arctic

Areas of Support

The CPA supports:

- cleanup of government facilities and remote sites
- the requirement for government and industry to follow the same standards

PROTECTING THE ARCTIC ENVIRONMENT (cont'd)

- government development of centralized disposal and storage sites for specific wastes

Areas of Concern

The CPA would be concerned if more stringent waste disposal procedures for the upstream petroleum industry were regulated as current regulations are adequate. If new industry regulations are planned, the CPA requests that it be consulted for input.

Background

The upstream petroleum industry has an excellent record of waste disposal in northern operations.

APPENDIX A: SUMMARY OF CPA'S ENVIRONMENTAL PROGRAM

Environmental Activities Within the CPA

In the early 1970s the CPA took a number of initiatives that are helping lead the way to sustainable development, not only within the petroleum industry but within other Canadian industries. The association created an environmental standing committee, and also positioned the industry to reduce accidental oil spills and manage their containment and recovery. The CPA was also a charter member when the provincial environment minister established the Alberta Petroleum Industry/Government Environmental Committee in 1973.

The association's environmental efforts were largely spill-related throughout the 1970s, and its initial environmental research project had oil and brine spills as its focus. The CPA is now involved in an ever-broadening variety of environmental work.

Research

Since 1970, over 50 research projects with a total value of about $300 million have been conducted by CPA members, many through joint programs with other associations, governments, universities and other countries.

The CPA presently supports a variety of research initiatives, one of which is TFOSP, committed to spending $5.5 million on research over five years. Another CPA research activity is ESRF which is funded entirely by petroleum company contributions (at about $1 million per year) and managed jointly with government.

In addition to funding research, CPA members provide advice to several externally-funded research groups, including government groups. A notable example is PERD, which includes energy-related environmental research in its mandate. CPA representatives are members of several PERD technical committees and provide input on upstream petroleum industry priorities and research needs.

The CPA also has an environmental research committee with a mandate to coordinate and advise on environmental research issues, priorities and external interfaces.

APPENDIX A: SUMMARY OF CPA'S ENVIRONMENTAL PROGRAM (cont'd)

Research (cont'd)

Past environmental research initiatives by the CPA include the CPA Environmental Research Advisory Council, formed in the mid 1970s, and the ADRP. The Canadian Offshore Oilspill Research Association (COOSRA) was initiated in 1980 and funded (at approximately $1 million per year) by members of the upstream petroleum industry involved in frontier offshore exploration. A number of studies under the COOSRA program were conducted jointly with the upstream petroleum industry and governments. The largest project involving COOSRA was the Baffin Island Oilspill Study (BIOS), a 4-year, $7 million study conducted on Baffin Island. Governments and private industry in both Canada and the U.S. were involved, as well as the government of Norway.

Operations

In 1980 the association significantly broadened its environmental activities. Encompassing all types of industry operations, the association published the first edition of "Environmental Operating Guidelines for the Petroleum Industry". Three years in the making, these guidelines are a compendium of legal, regulatory and technical requirements for environmentally sound oil field practices. Since their publication the industry has broadly integrated environmental management into industry operations.

Waste Management

In 1983, the CPA released waste disposal guidelines for the petroleum industry and fostered their implementation through industry-wide seminars. The association commissioned research studies on the disposal of oily wastes through land farming, and on the reclamation of land affected by spills. The CPA also successfully developed a special incinerator for oilspill wastes.

Work Environment

Hazardous materials management in the workplace received special attention in 1988. In that year the CPA created an education training package for oilfield workers and generic labels for hazardous materials.

APPENDIX A: SUMMARY OF CPA'S ENVIRONMENTAL PROGRAM (cont'd)

Sulphur	The CPA's Sulphur Handling Guidelines illustrate ways to handle sulphur safely and with minimal risk to the environment. First published in 1981, the association updated them in 1983.
ADRP	In 1983 the CPA made a major financial commitment to a baseline study of the impact of SO_2 emissions and other air pollutants. The ADRP investigated the biophysical and medical effects of air emissions in Alberta. It received acclaim from scientists and scientific organizations around the world. The research teams issued their final reports in 1988.
Frontiers	Since the early 1970s, the CPA has organized and sponsored annual conferences on environmental and socio-economic issues in the frontier regions. These conferences are in addition to the ESRF, established in 1983. During the 1980s, ESRF published 105 specialized research studies on frontier-related environmental subjects.
Environmental Code of Practice	In 1988 the CPA adopted an environmental code of practice for the industry. The code encourages member companies to strive for high environment performance standards. To supplement the code, the association updated its Environmental Operating Guidelines and prepared guidelines for environmental audits and public consultation.
Public Information Activities	The association believes in public participation and consultation. The ADRP, for example, used one of the most elaborate public involvement programs ever incorporated in a major scientific research program. And one of the key provisions of the Environmental Code of Practice is that oil and gas companies acknowledge the legitimacy of people's right to know about the particulars of projects that will affect them or their environment.

APPENDIX A: SUMMARY OF CPA'S ENVIRONMENTAL PROGRAM (cont'd)

Public Information Activities (cont'd)	In keeping with that, the CPA has also developed Public Consultation Guidelines, which are finding use beyond the oil and gas industry.

APPENDIX B: CPA ENVIRONMENTAL CODE OF PRACTICE

Policy Statement

Companies are committed to protecting the environment and to maintaining public health and safety during all phases of operation of the petroleum industry. They do so on behalf of their shareholders and employees, and on behalf of present and future generations of Canadians

Planning

Companies will assess the potential effects of their projects and will integrate protective measures into the planning process to prevent or reduce impacts upon the environment and on public health and safety.

Environment and resource use and public health and safety considerations will join economic, technological and operation evaluations as fundamental components of the planning and decision-making process. This approach will satisfy sound business principles while ensuring that planning, development and operating decisions reflect sensitivity to environmental issues and concerns.

This principle emphasizes the importance of anticipating potential positive and negative effects upon the environment, understanding the interactions and potential consequences between projects and the environment, and the necessity of taking action. To ensure that appropriate action is pursued, environmental planning will be incorporated into all aspects of project design and development.

Anticipating a project's environmental impacts and its associated effects upon public health and safety will enable companies to develop strategies which ensure that impacts and risks are managed. This process will not be limited to new projects nor applied only at the approval stage. Rather, it will be applied to all activities from initiation to decommissioning. It represents a long-term commitment to environmental protection and maintenance of public health and safety.

APPENDIX B: CPA ENVIRONMENTAL CODE OF PRACTICE (cont'd)

Consultation

Companies will provide relevant information in a timely fashion to the public and to governments with respect to corporate policies and activities and will be responsive and sensitive to community concerns.

The need for and the extent of consultation depends on the locations, size and nature of an operator's activities. Companies are committed to determine the need to consult early in their planning process. The consultative process will include education, information and communication.

Companies will foster the consultation process by creating the mechanisms required for allowing effective communication during the various phases of the project or activity. Responsibility for this process will be assigned to individuals who have decision-making authority. Consultation meetings with governments, communities and the public will be held early in the process to ensure that sufficient time is available to present all the relevant information, listen and respond to concerns and implement corrective action. In some circumstances, member companies will consider funding directly affected parties to provide access to necessary technical expertise and to facilitate their participation in the consultation process.

Consultation does not mean that companies will be required to divulge information which could affect their competitive position, and they must retain the right to manage all aspects of their operations.

Compliance

Companies will comply with applicable laws and regulations and will adhere to the intent of industry guidelines.

Companies will develop and participate in environmental compliance programs. These programs include environmental audits, inspection and monitoring.

APPENDIX B: CPA ENVIRONMENTAL CODE OF PRACTICE (cont'd)

Compliance (cont'd)

Environmental audits (reviews) will be systematically conducted by each company. The results of the audits will be confidential and will be the responsibility of the corporate officers. These audits will be used by the company to assess their compliance with corporate policies, government regulations and industry guidelines, and to identify deficiencies and develop programs for improvement.

Companies will implement inspection and monitoring programs to detect and minimize unanticipated incidents which may result in a state of noncompliance. If such events occur, corrective action will be taken.

Companies will cooperate with government representatives in the development of abatement programs. If a company wilfully or wantonly violates laws and regulations, member companies fully support firm enforcement of the law to protect the environment.

Industry associations will continue to serve as a vehicle for companies to cooperate in developing industry guidelines. The guidelines will periodically be reviewed and updated to ensure that they reflect the best practical technology.

Corrective Action

Environmental damage caused by company activities will be corrected in a timely and efficient manner.

If oil and gas development activities result in negative impacts on the environment, timely corrective action will be taken. Corrective action is the response to a situation or practice which will or has potential to have a negative effect on public health and safety.

In most cases, corrective action will be based upon established corporate plans and procedures or industry guidelines. The speed with which action is pursued will depend upon the potential risk to human health and safety and the risk of the

APPENDIX B: CPA ENVIRONMENTAL CODE OF PRACTICE (cont'd)

Corrective Action (cont'd)

impact increasing. If the impact is limited and controlled, specific actions may take advantage of operational circumstances, including timing to avoid seasonal constraints.

If environmental protective measures cannot reduce damages to acceptable levels, companies will make every effort to negotiate compensation agreements directly with the affected property owners.

Emergency Response

Companies will implement programs to minimize the consequences of emergency events by ensuring prompt and effective response.

The fundamental assumption underlying the emergency response principle is that all available and practical resources and skills will be brought to bear to bring an emergency under control.

While the probability of an emergency event occurring during oil and gas operations may be low, should it occur its consequences could be severe. Accordingly, prevention of such emergency events will be the industry's first priority.

Companies will develop timely and effective response plans to deal with possible emergencies. The complexity and detail of the emergency response plan will depend upon project specific factors, assessment of risk and potential consequences of an emergency incident.

The components of emergency response plans will include: an operational plan which defines decision-making authority, methods of implementation, and available resources; a communication plan which includes internal and external communications segments; and procedures by which the plan can be evaluated.

Research

Companies will encourage and support research relevant to improving industry's ability to protect the environment and maintain public health and safety.

APPENDIX B: CPA ENVIRONMENTAL CODE OF PRACTICE (cont'd)

Research (cont'd)

Research refers to any discrete project designed to develop and assess new designs and procedures in response to current or anticipated problems and must be based on good science. Research supported by companies primarily responds to questions of "need to know" as distinct from "nice to know".

Where there is reason to believe that the environment faces damage, or there is a risk to public health and safety, companies will use research as one means to improve related designs and procedures.

Companies will cooperate in developing and implementing research with industry associations, other companies, government agencies and directly affected parties. To successfully achieve the research objectives, every effort will be made to develop a consensus on the studies to be conducted and the research methods to be employed.

The results of non-proprietary research programs will be available to the public and effectively communicated to directly affected parties.

ABBREVIATIONS

ADRP	Acid Deposition Research Program
CEPA	Canadian Environmental Protection Act
CFC	chlorofluorocarbon
CO_2	carbon dioxide
EAMES	Eastern Arctic Marine Environmental Study
EARP	Environmental Assessment and Review Process
ENGO	Environmental Non-Government Organization
ESRF	Environmental Studies Research Funds
NOGAP	Northern Oil and Gas Action Plan
NOx	nitrogen oxides
NSERC	Natural Sciences and Engineering Research Council
OLABS	Offshore Labrador Studies
PERD	Panel on Energy Research and Development
TFOSP	Task Force on Oil Spill Preparedness